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Farr, Richard S.

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ABSTRACT
The flow of knowledge from researchers to users is aided by knowledge linkers who activate the interpersonal network of communication within the target audience. The linker enters this network by contacting (through periodicals, mass media, conventions, and directly) individuals in the audience who are more active than others (gatekeepers). Once gatekeepers have been identified, the linker, aware of the stages through which idea adopters must pass before accepting a new idea, must successfully communicate to them an understandable, attention-getting message which arouses personality needs and makes appropriate suggestions to meet these needs. This message is then passed on to the rest of the target audience by word of mouth. The linker must also actively solicit audience needs and apply them to research products, serving as a two-way force for facilitating the flow of information. The linker's role, however, has been complicated by problems such as overload and marginality; when the functions of linkers are institutionalized, these problems, as well as the problems of lack of job security, coordination of activities, and specialization, are lessened. (A 13-item bibliography is included.) (SP)

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Knowledge Linkers and the Flow of Educational Information

By Richard S. Farr

A Paper from ERIC at Stanford

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KNOWLEDGE LINKERS AND THE FLOW OF EDUCATIONAL INFORMATION

By Richard S. Farr
Research Assistant
Institute for Communication Research
Stanford University

An Occasional Paper from ERIC at Stanford

September 1969

FOREWORD

The ERIC Clearinghouse at Stanford, in its first eighteen months of operation, may have provided a partial model for Richard Farr's paper. It seems more certain, however, that the paper we commissioned will have an effect on future clearinghouse activities.

By making the paper available outside the clearinghouse we hope to aid people involved in the growing number of similar operations, but we also count on receiving comment from readers which will allow us to issue an improved version in the future. In that sense, this is definitely a "working paper."

This paper itself, of course, is dedicated to playing a linking role, between the existing relevant research and all of us who find our roles in the educational innovation system to be challenging.

Don Coombs and William Paisley

KNOWLEDGE LINKERS AND THE FLOW OF EDUCATIONAL INFORMATION

Knowledge, to have much value, must at some time move from the minds of the individuals responsible for its existence to the minds of those responsible for its utilization. Such movement is usually referred to as the "flow of knowledge," and often there is an intermediary aiding in the movement.

Figure 1 is grossly oversimplified, but it does focus on the position, function, and role of the intermediary or "linker" in the educational system. (This use of "linker" originated with Ronald Havelock. See Havelock, 1967.) After a closer examination of the

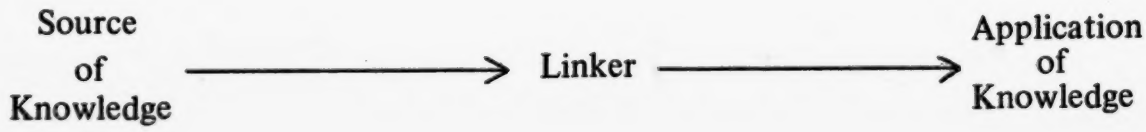

Fig. 1

The Flow of Educational Knowledge

other two elements in our chart, we shall attempt a more detailed representation of the educational knowledge flow system and the role of the linker.

Source of Educational Knowledge

Many types of individuals in many types of institutions are sources of educational knowledge. Educational research is one such source, but there are numerous others–textbooks in educational procedures and methods, so-called "think" pieces by scholars in journals, and serendipitous discoveries by inventive administrators and teachers.

Seldom, however, is the producer of a bit of knowledge responsible for inserting it in and propelling it through the "knowledge flow system." And probably this is a good thing. Acquaintance with the practical considerations involved in utilizing educational knowledge is relatively low among knowledge-producers. The most productive research is not usually conducted by the man who bears the everyday responsibilities of the teacher or administrator, nor is the best teaching done by researchers. Rarely can these two functions be carried out well by a single individual, but neither the researcher nor the teacher can do his best work in ignorance of the other. Here is where the linker comes in.

In the early stages of the diffusion of knowledge, the form of the information will hardly be appropriate for consumption by someone who wants to put it to work. You have

all seen the articles that make up the educational research journals. Compare them with the four-color, glossy instruction manual that comes with a new car or television set, or even a lawn and garden care manual. Much time, effort, and money are lavished on these commercial brochures so that they will be effective. That is not to say that educational innovations ought to be disseminated in such formats, but the contrast points up the difference between announcing knowledge and facilitating its utilization.

Users of Educational Knowledge

Our flow chart is also grossly misleading in representing the application of educational knowledge as a single element in the scheme of things. We all know that the users of educational knowledge are a broad and diverse group. They have been described as "the deep, vertical audience for educational information" (Paisley, 1969). Administrators at the federal, state, county and local levels, consultants, topic and technology specialists, teachers, parents, and even at times students themselves are all members of this extensive audience through which educational ideas and practices must filter down. Although few valid generalizations can be drawn about these people, perhaps they can be characterized fairly as having little or no appreciation for the concerns and orientation of those responsible for the creation of knowledge. Their understanding of the procedures, self-imposed rigor, and motivation of the researchers and academicians is at best limited. Here again we see where the role of the linker, in not only communicating to this deep and heterogeneous audience but also in overcoming the inherent apathy to educational research, is an essential one in maintaining the flow of information.

The obvious question is how the linker can even begin to reach the huge audience just described. He has several channels from which to choose. There are the periodicals primarily aimed at specialized audiences–administrators, teachers, audio-visual specialists and the like. There are also the mass media channels which reach the larger audience of parents, concerned citizens and students. There are conferences, conventions of special interest groups, direct mail access to these same groups via their membership lists, and direct contact by visits to the schools themselves. However, extensive studies have shown that informal, interpersonal channels of communication are by far the most effective way to reach an audience. That is, *word gets around best when people talk to each other.* It is this interpersonal network of communication, therefore, that the linker must seek to activate. The use of the media cannot be ignored, however, for it is an important element in the activation process.

Later we will look more closely at what research has to say about the functioning of this interpersonal network in the diffusion of information, but now let us mention briefly just how a linker gains access to the network. Certain individuals in the mass audience are more active than others in introducing new information into the network. In different contexts they have been given several different labels, such as influentials, early adopters and opinion leaders. But for our purposes we shall use Kurt Lewin's term "gatekeepers" (Lewin, 1947). As members of our target audience, these people can open the gate and admit new information into the audience's person-to-person communication network. As we

shall see later, these gatekeepers have certain traits that make them more accessible than other members of the audience, and this makes our jobs as linkers somewhat easier.

The Educational Linker

Having looked at what really lies behind the simplistic terminal points in our first flow chart, let us now try to portray more accurately the real picture of the educational knowledge flow system. We shall concentrate upon the structure of the audience and the relationships between the linker and the two end points. The source of educational knowledge will continue to be portrayed as simply as possible, recognizing that others have

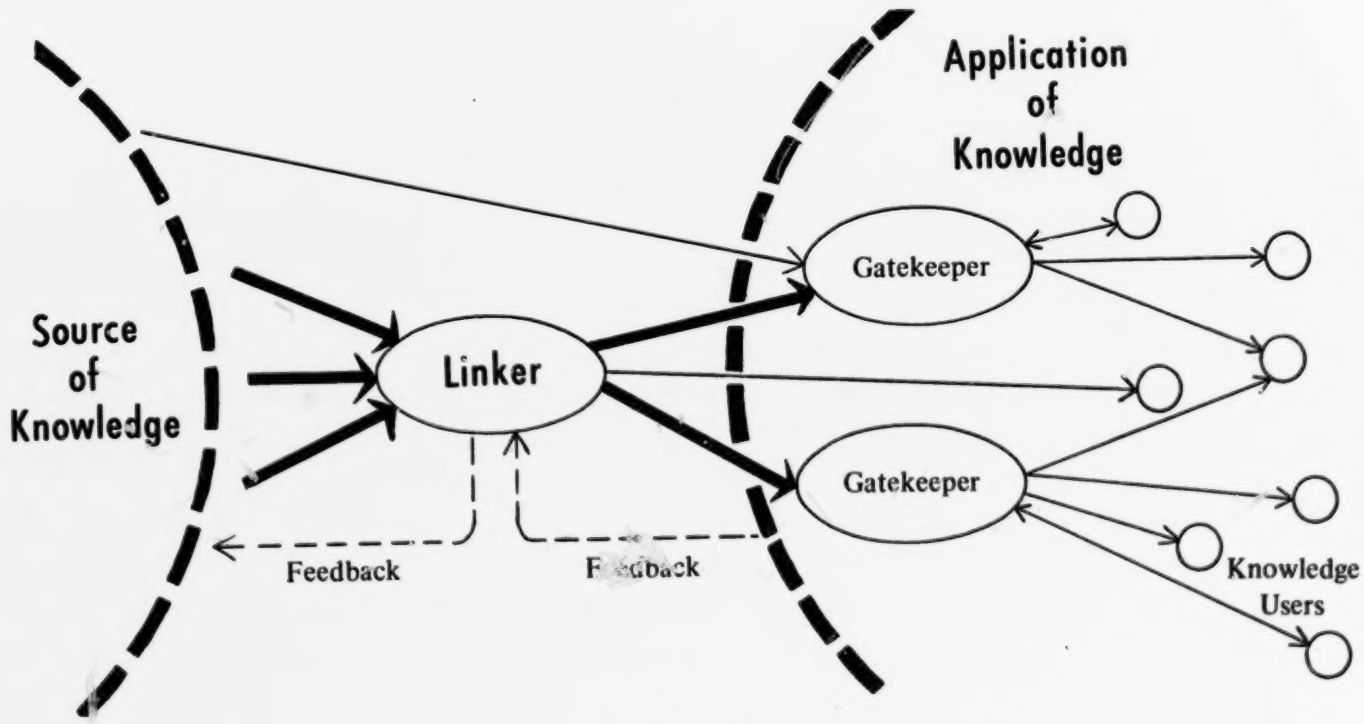

Fig. 2
The Flow of Educational Knowledge
(Expanded Diagram)

concentrated their efforts in this area (see Pellegrin, 1965) and that the focus of this paper is on the linker and how he can function effectively. For this purpose we need to concentrate on the audience with which he is concerned. Note also in our revised diagram that provision has been made for two-way communication, or feedback, between the linker and both the source and the users of knowledge. It must be recognized that effective communication seldom can be carried on over a one-way channel.

You yourself are a linker. Or at least you probably are familiar with the task and problems of a linker. What does a linker do? The answers to this question will be as varied and numerous as the individuals answering it. Witness for example some of the different labels that have been applied to individuals filling what are essentially linking roles: conveyor, packager, extension specialist, detail man, demonstrator, information retrieval

specialist, consultant, and change agent. But in the most general terms, as we tried to emphasize in Figure 1, the linker's role is a relatively clear cut one. His function is simply the gathering, processing, and distribution of educational knowledge. That is not to say that his job is an easy one; rather it is a demanding task requiring specialties that are not yet completely understood, and the position is one which has not yet been recognized for its full importance nor accorded its deserved status.

Inherent Difficulties in the Role

Havelock has identified two major problems which the knowledge linker constantly faces (Havelock, 1967). He calls them *overload* and *marginality*. Overload is the great work demand made upon the linker in each of his functions. Havelock identifies three types of overload problems: number, complexity, and difficulty. In retrieval, the body of educational knowledge is massive, often highly technical, even inaccessible. If the scope of the information gathering has not stopped the linker, then he faces the job of processing that which he has retrieved. Here again there is a wealth of material to be sorted through, and a translation from the highly technical jargon of the researcher to language understandable to the practitioner. In dissemination the audience is huge, its demands are diverse and complex, and--finally—it is just plain hard to reach.

Marginality presents a completely different set of difficulties. It refers to the linker's position as a go-between. He is not an initial source of knowledge, nor is he a member of the client community who apply the knowledge to the ongoing educational process. There are partial exceptions to this type of uncommitted middleman; there are those who belong to one camp and try to carry on direct communication with the other. Their situation usually hinders their functioning as researchers or teachers and really doesn't increase their effectiveness as linkers. While marginality is inherent in the role of the linker, it can be construed as an advantage as well as a disadvantage. The impartial, "no-axe-to-grind" middleman is able to maintain a certain trustworthiness and credibility attainable by no one else.

Marginality is hopefully just a temporary problem for linkers. Anyone who assumes a new role in an institution must fight an uphill battle against suspicion among other members of that institution who have not yet accepted the need for the new role. As time passes, however, the function of the role, its usefulness and its legitimacy become established, and regardless of its marginality, some of the problems that went hand-in-hand with getting the role established disappear.

To Havelock's two problems I would add only one other element which seems implicit throughout his discussion. The entire concept of a linker suffers from a *lack of recognized precedence* for such a person. Information storage, retrieval and exchange as a science and legitimate academic pursuit is only a recent development. Librarians, reference librarians especially, have never been recognized for what they truly are, linkers between the vast storehouse of knowledge on their shelves and the community at large. However, the efforts of librarians represent only a small portion of the role envisioned for linkers in the educational knowledge flow system. Libraries collect information, but really go little further. No collating, packaging, or processing of information takes place. And although it is

unfair to say that libraries never disseminate information, it is true that any information exchange that occurs is information *sought* rather than information *given.* Seldom do libraries attempt to reach out to members of the community and say "Here is some material that we think might be useful to you." Rather they rely on audience initiative to start any information exchange. That situation is a far cry from what is envisioned for educational linkers.

Numerous disciplines offer suggestions as to how this more dynamic type of linker might best operate. The new information sciences, psychology, rural sociology, communication research, marketing and others all bear in one way or another on the problems facing the linker. The lack of precedent for the linker really means that no one has ever attempted to pull together the relevant materials from all these areas and show their applicability. No schools offer training in how to be a linker, but an analogous precedent to what is envisioned in the educational knowledge flow system is the Agricultural Extension Service in the Department of Agriculture. The role of the agricultural county agent is well known, but even here the techniques are not wholly transferable. What is obvious, however, is that educational linking cannot possibly be done by individuals alone, but requires the resources and legitimacy of a rather comprehensive organization.

Advantages of Permanent Linking Institutions

An institution constituted solely to link sources of educational knowledge with potential users is a giant step toward the ideal type of educational knowledge flow system we envision. First of all, institutionalizing this role helps to overcome some of the problems outlined above. The overworked linker becomes the overworked linking institution—not a perfect solution, but perhaps an improvement. The lonely, unrecognized linker besieged by Havelock's problem of marginality now is joined by a group of colleagues in a marginal, unrecognized linking institution. Again, there is an improvement, for individual mental health anyway. Most of you recognize the problems cited above, and as members of permanent linking institutions you know that simply banding together is not a panacea. However, establishing ongoing projects designed to serve as links between the sources and users of educational knowledge does have several advantages.

Havelock talks about the *security* an institution offers the individual (Havelock, 1967). This is primarily an economic consideration and results from the permanence of the institution. The individual knows where he will be working tomorrow and is assured of a position in an identifiable organization rather than feeling that he is free floating in ambiguous nothingness between the resource system and client system.

Another advantage is the *identity* an institution offers the individual. Picking up where security leaves off, the legitimizing function of a permanent institution not only makes the individual feel he is doing something important and worthwhile, but it also compels others to begin to think the same way. Here marginality begins to diminish because although the linker is still neither fish nor fowl as far as the traditional resource and application systems of education are concerned, he is working for a duly constituted, functioning organization which, it will be assumed, must have a worthwhile purpose for existing.

Finally, a linking institution permits the *coordination* of the multiple functions required of a link in the flow of knowledge chain. This would seem a good time to examine more closely exactly what the functions of such a link must be. What we earlier labeled the collection, processing, and dissemination of educational knowledge, Havelock refers to as the input, throughput, and output of a permanent linking institution (Havelock, 1967). The facility to coordinate the separate activities in an institution is certainly a positive step toward reducing the tremendous workload borne by an individual linker as discussed earlier. And more importantly, perhaps, it permits the *specialization* by individuals in one area or another of the entire linking task. Input is primarily a librarian's job, collecting and cataloguing, although the task requires knowledge of audience desires and of the capabilities of the resource system to answer them. For the remaining two functions, it is more difficult to cite analogous operations in other areas. The output or dissemination of information obviously requires extensive familiarity with the audience. Since we are primarily concerned with communication via the print channel–papers, journals, direct mail, etc.–the activities of the county agent of the Agricultural Extension Service are not very relevant, and perhaps the jobs of membership secretaries or newsletter editors in large special-interest organizations are more parallel. The dissemination of knowledge requires knowing about the process of adoption of a new idea or product, as well as a never-ending search for potential members of the target audience and the gatekeepers therein.

The throughput or processing of education information is perhaps the most challenging of the three functions, if for no other reason than that it is the one about which we know the least. The information processor must be familiar with the desires, personalities, and day-to-day considerations of his intended audience. He must be familiar with the resource system of educational knowledge so as to know where to turn in pulling together the necessary elements for a comprehensive treatment of a topic. He also must know the principles of attitude change, packaging, consumer motivation, and all of the various factors that go together in making a message maximally efficient in reaching and having the intended effect upon its audience.

Ideal Functioning of a Linking Institution

An educational linking institution ought to:

1) anticipate or sense an area of concern among members of its target audience,
2) turn to the resource system and gather all the available information on that subject,
3) select only the most salient elements, summarizing and drawing conclusions,
4) present this exhaustive review of the literature in an easily readable and digestible form, and
5) disseminate the document effectively, reaching the most influential members of the audience which is in need of the information.

Obviously there are several subspecialties involved in this entire task, from the reference librarian through the copywriter through the layout and typography specialist to the keeper of the mailing list. A permanent linking institution established for the purpose of aiding in this type of educational information flow is a far cry from the single individual trying to carry on the same task.

An added feature of the second information flow chart is the capacity of the channels between the linker and the resource and user systems to carry two-way communication. This return communication constitutes what is commonly referred to as feedback, giving information about how initial messages are being received. A laugh from your audience after you tell a joke tells you that they "got" the joke. Similarly, reactions from the client system tell the linker what is good and what is not so good about the papers he is disseminating. However, in other than face-to-face situations, feedback is not readily forthcoming; it must be actively sought. Industries exist purely for this purpose, such as the television rating services. Herein lies a function of the linker's role that has not been discussed much. It falls to the linker to act as a catalyst to the entire flow of communication. Researchers and academicians must "publish or perish," but what they publish is of little use to potential users in its traditional format. On the other hand, teachers, administrators, and parents sporadically seek out the latest information on a topic of current interest only to encounter a frustrating and often fruitless experience. The linker not only bridges the gap between these two systems, but also can initiate appropriate communication to see that a maximally efficient interchange of information occurs.

Tomorrow's Linker

The linker must go to his audience in the user system and discover what sorts of information are desired. He then turns to the resource system and looks to see if such information is available. Oftentimes it is not. In that case the linker serves as a go-between in a sort of two-step feedback channel wherein he provides the researcher with guidance for further research efforts. This, of course, is not very much like the lonely little linker portrayed earlier, who was recognized by no one.

The linking institution of tomorrow is no longer a single individual, no longer a salesman with a commercial axe to grind, no longer a nonentity in the educational information flow system. Educational linkers are being called upon to shape the educational future of this country. Why? Because they are really the only ones in position to do it. They are central to the flow of information, in touch with those who need to know and those who can tell them. A linking institution is not to be a passive midpoint in the flow of educational knowledge, but rather an active force in sending to, and seeking from, all those others who make up the educational community.

The Stages of Adoption

You, as a linker, have seen new ideas adopted in the educational context, and probably even have participated in the process yourself. But what really goes on? Over the last thirty years, research has studied the adoption of all kinds of new ideas—from hybrid

seed corn to birth control pills to driver education courses. Evolving from this work is the generally accepted notion that individuals must pass through a series of identifiable stages leading to the adoption of a new idea. The most accepted list of these stages is presented in *Diffusion of Innovations* (Rogers, 1962). They are:

1) Awareness–the individual first learns of the existence of a new idea, but really doesn't know very much about it;
2) Interest–he feels that the idea might be relevant to him and seeks to learn more about it;
3) Evaluation–the individual applies the idea to his own particular situation and assesses its value to him;
4) Trial–he carries out more active evaluation by a "trial run" of this idea on a small scale; and
5) Adoption–finally, and only after passing through all the preceding stages, the individual adopts the idea and extends the trial to full and continued use.

The linker must realize the necessity for all adopters to pass through these stages before accepting a new idea, and the need for different types of support and encouragement for the individual in each of the stages. The exact nature of this support will be discussed shortly, but first we should consider some of the findings of the researchers involved in the diffusion of educational innovations.

Barriers to Change in the American School System

Much of the educational diffusion research was conducted by Paul Mort and his colleagues at Teachers College, Columbia University. Mort concluded that the spread of a new idea through the American school systems takes approximately fifty years, considerably longer than through other types of systems in this country (Mort, 1964). There seem to be three major reasons for the slowness of our schools to change (Carlson, 1965). The first of these is a *lack of educational change agents.* "It is suggested that support and conceptual help provided by consultants (cf. the role of the county change agent) may be essential for adequate development of awareness, interest and later adoption" (Miles, 1964, p. 652). We certainly will not argue against the position that change agents would be desirable in speeding up the process of adoption of new educational ideas in this country. Diffusion research has repeatedly shown this to be true, and limited efforts in this area by the New York State Department of Education prove its applicability to the educational setting (Carlson, 1965). However, we will address ourselves to the question of how the educational linking institution can be most effective, considering the limited person-to-person contact inherent in that role.

The second barrier to educational change is the so-called *weak knowledge base.* This obviously points toward the knowledge resource system depicted in our Fig. 2. Its weakness is that educators see it as being inapplicable, incomplete, and downright questionable. Pellegrin cites several obstacles to sound educational research, including the fact that the topics to be studied are very complex and difficult to research:

> We have here a vicious circle: a) many educators do not conceive of the scientific method as being of primary significance to their work; b) this state of mind creates an atmosphere in which low priority is given to the conduct or utilization of research; c) because of low evaluation and neglect, research continues to be a dubious enterprise; and d) because condition (c) exists, condition (a) is perpetuated (Pellegrin, 1965, pp. 71-72).

While this weak knowledge base probably is a factor in the slow diffusion of educational innovations, it is unrealistic to expect every new innovation to emerge full-blown from the resource system supported by research and ready for use. Indeed, such is never the case, even in non-educational areas.

It must be recognized that no innovation can ever be completely researched, fully developed, or all its implications realized until it has been tested in the field. As is to be expected, many school administrators are not especially happy to have themselves, their teachers, or their pupils serve as guinea pigs in such research. So while this weak knowledge base and the factors which perpetuate it continue to be a problem, there is a possible solution. In non-educational areas, innovations which are not yet fully developed or researched seem to spread more quickly. It may be that one of the reasons for the slow adoption process in the educational setting is the manner in which new ideas are presented to practicing educators. Improved linkage between sources of these ideas and the prospective users may help to remove this barrier.

Carlson's third reason for the slowness of the educational system to adopt changes is the *domestication of the public schools.* Domestication refers to the fact that our public schools do not select their students and their students do not select them. School attendance is, for the most part, legally and geographically determined. There is no competitive element in this situation as far as the school is concerned; it has a guaranteed pool of students who have no choice in whether or not they will attend. Carlson says that "the consequence of domesticating organizations, as far as organizational change is concerned, is to restrict the need for, and interest in, change because the environment of domesticated organizations in many important respects is more stable than it is in other types of organizations" (Carlson, 1965, p. 7). This is true, but linkers must keep in mind that a competitive situation is nothing more than a state of mind. We can almost assume that there is an innate pursuit of excellence in most school personnel which can be exploited as we seek to further the diffusion of innovations through the educational system. That is not to say competition per se is a good thing among our schools, especially when it develops into a wasteful and dysfunctional rivalry causing inconsidered adoption of innovations simply for the sake of adopting. But articles reaching an administrator which tell of new practices recently instituted by school districts of comparable size and means to his own should kindle a spark of competitiveness and move him from awareness to the interest and evaluation stages of adoption.

Channels of Communication in the Adoption Process

As linkers, we return our attention to the deep, vertical audience of educational

information and consider the channels of communication to and through it during the adoption process. Nearly three decades ago researchers made the serendipitous discovery that ideas do not flow directly from the mass media to the mass audience, but from the media to selected individuals in the audience and then on through the remainder via interpersonal channels of communication (Lazarsfeld *et al.*, 1944).

We should learn a little about these select individuals in the audience who provide access to mass media messages, and then we can turn our attention to the differing use of the media in the different stages of adoption. Gatekeepers permit messages from the mass media to enter the interpersonal channels, the discussions of small groups, in the mass audience. These individuals are the obvious targets of our messages about new ideas in education, not only because of the access they provide, but also because research has shown that they exert a disproportionate amount of influence in the adoption of new ideas.

But how do we locate these gatekeepers in our target audience? Three research techniques have been used to accomplish this task. Gatekeepers have been asked to identify themselves, other members of the group have been asked to identify them, and key informants have been asked to point them out. But linkers may never have to resort to any of these methods. We already know from a large number of studies what some characteristics of gatekeepers are. Knowing these characteristics, you may be able to identify the gatekeepers in your target audience rather easily.

Gatekeepers are distinguishable from the remainder of the audience in several ways. They use the mass media and other sources of information external to their own group more frequently. This attribute works in our favor, for simply by inserting a message about a new educational idea into the mass media, we will begin to reach the gatekeepers in our intended audience. Another attribute is their "cosmopoliteness," their general orientation toward persons and topics external to their own group. They are more likely to attend conventions, be interested in new things, belong to special organizations, and have personal contact with individuals outside their own group. These characteristics which identify individuals as gatekeepers simultaneously make them more readily accessible to our messages.

Gatekeepers, in order to function as gatekeepers, maintain a high level of social participation within their group, too. Essentially, as Figure 2 shows, the gatekeeper functions very much like a second linker in the flow of information system. He actively seeks out information and then makes it available to the rest of the audience. He links the linker and the client system. The gatekeeper is also likely to be in a position of slightly higher status than those he influences. In some groups with which we deal as educational linkers, there are individuals who are gatekeepers by dint of their jobs; that is, they fill a position which carries with it a gatekeeping function.

Finally, gatekeepers are characterized by their greater innovativeness. This trait works in our favor because, as important target individuals in our audience, gatekeepers are more likely to be ready to accept the new ideas which we seek to disseminate. In sum, gatekeepers provide access to our target audience and its channels of interpersonal communication, while at the same time they are more easily accessible to us via the mass media and more likely to be receptive to the new ideas we have to present.

Differing Use of the Media Through the Stages in Adoption

Returning to the stages in the adoption process and the linker behavior appropriate to each, it appears that the four preliminary stages in adoption can be categorized as the informative stages (awareness and interest) and the evaluative stages (evaluation and trial). All four stages leading to adoption are really informative in a sense, but the information-seeking becomes increasingly specific and personalized. Information gained in the first two stages is quite generalized; it is more about the innovation itself than about its particular relevance to the individual. The third and fourth stages, evaluation and trial, are marked by very personalized information-seeking as the individual assesses the innovation's appropriateness to his own particular circumstances.

Theory and data have led researchers to conclude that the mass media are used more in the informative stages of adoption, but are forsaken for more personal and more localized sources of information in the later evaluative stages. Information-getting satisfactory for the informative stages can perhaps only be accomplished using the media—sources of information external to one's own group. However, as one moves on to evaluate the innovation, the credibility of the communicator becomes more important and the greater need for a two-way channel makes the impersonal media inappropriate.

After the individual has learned enough about the new idea to warrant further evaluation, he finds the mass media unsatisfactory because he cannot ask any questions about the idea and how it applies to him. The greater the risk involved in the adoption of an innovation, the more important the personal sources of communication become (Bauer, 1961). Linkers must keep in mind how people's needs change as they move through the pre-adoption stages. This paper is restricted to the print media, and those channels can be effective in meeting these needs. Boyd and Levy (1967, p. 103) point out that the food and drug companies try to simulate interpersonal contacts in their mass media advertising by using next-door-neighbor type actors to deliver testimonials for their products. Also, such advertising often shows the product in use, which constitutes a vicarious trial period for the audience. Hopefully the gatekeepers and early adopters will supply the necessary personal encouragement sought by later adopters, but the print channel must not be written off completely as a means of providing encouragement for the early adopters.

Know Your Audience! This dictum, basic to all communication, cannot be overstressed. There are three elements common to every situation in which communication takes place, the source, the message, and audience. The communicator has relative control over the first two, the source (himself) and the message. But the audience is beyond his immediate control.

All too often the audience is an unknown quantity in the communication formula. As Lorge puts it (in Klare and Buck, 1954): "The audience fails to understand the writer because the writer has failed to understand the audience." But it goes beyond just simply understanding. Schramm (1961) sets forth four conditions which must be met in order for successful communication to occur. The message must

1) gain the attention of the intended audience,
2) use signs understandable to this audience,

3) arouse personality needs in the audience and suggest ways in which these needs can be met, and
4) make these suggestions appropriate to the group situation the audience finds itself in when the decision is made to act.

Each of these conditions requires knowledge of the audience, of the individuals' life styles, their language skills, their personalities, and their social situations. The communicator will never achieve complete control over his audience, but sending a message to them is an attempt to gain a certain degree of control. And getting them to attend to the message requires knowledge of the audience.

As Klare and Buck put it (1954, p. 14), "It is not surprising that writers often fail to meet their potential readers, since the basis of their notions about 'the typical reader,' and about their *own* readers, is so shaky. The usual basis is hearsay, scattered opinions, or just simple guesswork." Such "simple guesswork" should not be totally discounted. Oftentimes it is perceptive and accurate. In fact, possessing such emphatic ability may be the mark of a successful writer. But linkers do not have to, and shouldn't, rely solely on "seat of the pants" intuition in trying to create messages for their audiences. There are other methods, more objective and reliable, for learning about your audience.

First, it should be recognized that the deep, vertical audience for educational information is so large and diverse that generalizations about it are close to meaningless. But linkers do not usually focus their attention upon the huge audience; nearly always they are interested in some subpopulation and often it is sufficiently homogeneous for meaningful generalizations to be drawn.

Ask Them About Themselves–

One easy technique for learning about your audience is asking them about themselves. Many educational linkers have lists of individuals interested in their activities, and mail questionnaires to such a list can seek information on sex, age, education, job function, problem areas, and degree of sophistication–all information needed by linkers seeking successful diffusion of new ideas.

Another way to learn about your audience is by attending to whatever feedback is forthcoming. The more feedback, the more information to be gained, and so it falls to the linker to encourage feedback. As discussed earlier, one of the linker's functions should be that of a catalyst to the entire information flow process. Feedback, as part of this flow, should be generated by whatever means possible. For the linker this means constant requests for audience comment, the provision of easy-to-use forms or reply cards for such comment, and the dissemination of articles and thought-provoking materials capable of sparking comment.

Just as important as generating feedback is responding to any received. The best way to positively sanction those who provide you with feedback is to attend to their comments and reply to their questions. If nothing more, a brief form letter thanking them for their interest can be sent. Not only will such attention encourage further such behavior on their part, but it will also help establish truly two-way channels of communication.

One final consideration here: All linkers have, or at least should have, some notion of what their ideal audience would be like. That is, linkers are typically vested with the responsibility of serving between the knowledge resource system and some specified subpopulation of the audience for educational information. Definition of this subpopulation often is included in a contract establishing the linking institution. You should critically assess the audience now being reached. How well does it match up with the ideal audience you are supposed to be serving?

Such analysis, of course, requires that you be familiar with your present audience. The above outlined techniques will help accomplish that. But now the test: Your present audience is not perfect. It most likely includes some members who are really not interested in your service, and omits others who would be interested. How do you go about reducing the discrepancy between the actual and the ideal audience? Such a task is not a one-time-only project; the assessment must be constant. The linker must take the initiative, seek out members of his envisioned audience, make them aware of the service he is performing, and add them to his mailing list.

What techniques are appropriate to this task? Send pamphlets and brochures to potential audience members, gleaning their names from the mailing lists of related organizations and the subscription lists of related periodicals. Buy advertisements in these same periodicals, or offer to submit a column of news and notes regarding your activities for publication. Personal appearances by staff members of your linking institution at meetings and conventions of related groups will also help to get the word out. These are just a few suggestions; the important point is for linkers to recognize their responsibility to identify and seek out the audience which needs and will make use of their services. Such a task requires knowing your "audiences," both the actual and the ideal one you ought to be reaching. This knowledge is essential to any effective linking activity.

* * *

The linker's role in the flow of educational knowledge is an emerging one which will expand in scope and be more clearly defined as it becomes better understood—better understood and appreciated by the sources of educational knowledge and by the client communities, and better understood by linkers themselves. Research and experience will soon have much to say about the optimal organization and operation of educational linking institutions. But a necessary first step for us all is an understanding of the educational knowledge flow system, the adoption process, and the linker's role therein. With this we can critically evaluate our present performance and assess our potential contribution, with an eye toward that ideal linking role we have discussed.

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